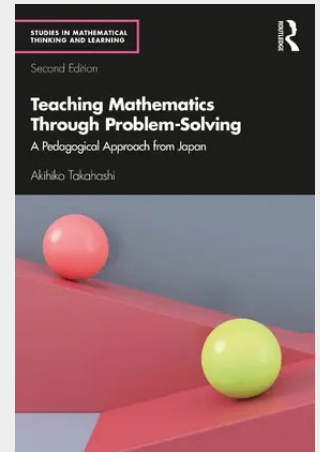


Teaching Mathematics Through Problem-Solving

A Pedagogical Approach from Japan

This new edition from renowned mathematics education scholar Akihiko Takahashi offers an in-depth introduction to teaching mathematics through problem-solving, providing lessons and techniques that can be used in classrooms for both primary and lower secondary grades. Based on the innovative and successful Japanese approaches of Teaching Through Problem-Solving (TTP) and Collaborative Lesson Research (CLR), Takahashi demonstrates how these teaching methods can be successfully adapted in schools outside of Japan. The new edition has additional classroom data and lesson examples included, as well as updated citations throughout. TTP encourages students to try and solve a problem independently, rather than relying on the format of lectures and walkthroughs provided in classrooms across the world. Teaching Mathematics Through Problem-Solving gives educators the tools to restructure their lesson and curriculum design to make creative and adaptive problem-solving the main way students learn new procedures. Chapters showcase TTP lessons for elementary and secondary classrooms, showing how teachers can create their own TTP lessons and units using techniques adapted from Japanese educators through CLR. Examples are discussed in relation to the Common Core State Standards, although the methods and lessons offered can be used in any country. New to this edition are classroom case studies, examples for additional grade bands, more visuals, and how to overcome challenges when implementing or justifying TTP. Written by a leading expert in Japanese mathematics education, Teaching Mathematics Through Problem-Solving offers an innovative new approach to teaching mathematics, suitable for pre-service and in-service primary and secondary math educators.

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